YW

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,957	09/27/2000	Inching Chen	42390.P9234	8316

8791 7590 02/23/2005

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER	
CZEKAJ, DAVID J	
ART UNIT	**PAPER NUMBER**
2613	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/671,957	CHEN, INCHING	
	Examiner	Art Unit	
	Dave Czekaj	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,13-18 and 30-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,13,14,16-18 and 30-38* is/are rejected.

7)☒ Claim(s) *15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to the rejection(s)of claim(s) 1-9, 13-14, 16-18, and 30-38 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 13, 16-17, and 30-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Wee et al. (6553150), (hereinafter referred to as "Wee").

Regarding claims 1 and 30, Wee discloses an apparatus that relates to image sequence compression (Wee: column 1, lines 5-6). This apparatus comprises "defining a spatial location across a series of pictures of a stream" (Wee: figure 10, column 10, lines 45-59, wherein the spatial region is the region of interest or the object, the series of pictures of a stream are the multiple frames of the stream) and "for each picture in the stream, partially decoding the picture to determine an area of the picture falling within the spatial location" (Wee:

column 21, lines 45-47, column 24, lines 39-53, column 30, lines 21-29, wherein the partial decoding is only decoding the areas of the picture which contain the object).

Regarding claims 2 and 31, Wee discloses "fully decoding at least the spatial location in the picture, but not all the picture" (Wee: column 21, lines 45-47, column 24, lines 39-53, wherein the spatial location is the region of interest (ROI) or object which is fully decoded while the remaining picture is not fully decoded).

Regarding claims 3 and 32, Wee discloses "forming a plurality of substreams from the partially decoded stream" (Wee: column 22, lines 1-14, wherein the partially decoded stream is the video sequence, the substreams are the streams made for the child and ball).

Regarding claim 13, Wee discloses "decoding a picture from a stream" (Wee: column 21, lines 45-48), "selecting a region of interest in the picture" (Wee: figure 10, column 10, lines 45-59, wherein the region of interest is the object), "constructing a new picture corresponding to the region of interest" (Wee: column 21, lines 30-50, wherein the new picture is the picture contained the updated color information of the ball), "transmitting the new picture to a node" (Wee: figure 2, column 12, lines 19-21, wherein the node is the computer) and "commanding the node to display the picture" (Wee: figure 2, column 12, lines 19-21, wherein the computer displays the picture to a user).

Regarding claim 16, Wee discloses "the regions of interest are different spatial locations of the picture which form the picture when combined" (Wee: figures 14-23, column 24, lines 39-53, wherein the region of interest is the object, the different spatial locations are the regions).

Regarding claim 17, Wee discloses "the regions of interest are overlapping areas of the picture which from the picture when combined" (Wee: column 24, lines 39-53, wherein the region of interest is the object, the areas of the pictures are the regions which include boundaries of the regions).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Wee et al. (6553150), (hereinafter referred to as "Wee").

Regarding claim 18, although not disclosed, it would have been obvious to send and display a picture to a second node or client (Official Notice). Doing so would have been obvious in order to make the system more efficient by being able to accommodate more than one user.

5. Claims 4-6 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koyanagi et al. (5557332), (hereinafter referred to as "Koyanagi") in view of Wee et al. (6553150), (hereinafter referred to as "Wee").

Regarding claims 4 and 33, Koyanagi discloses an apparatus for parallel decoding prediction-coded video signals (Koyanagi: column 1, lines 10-12). This apparatus comprises "decoding a picture into a plurality of slices having a set of slices at least partially within an area of the picture" (Koyanagi: column 6, lines 34-45, wherein the set of slices are the set of three slices which are decoded (the second, sixth, and tenth slice)), "decoding the set of slices into a plurality of macroblocks" (Koyanagi: figure 2), and "decoding the macroblocks into pixels" (Koyanagi: column 10, lines 50-55). However, this apparatus lacks not decoding the plurality of slices as claimed. Wee teaches that prior art computing systems must entirely decompressed/decoded a video signal even if only a small part of the signal is being edited (Wee: column 2, lines 4-10). To help alleviate this problem, Wee discloses only decoding a set of slices (Wee: column 24, lines 39-53). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Koyanagi and add the decoding taught by Wee in order to obtain an apparatus that operates more efficiently by only decoding the necessary slices of the image thus reducing the computation time on the processor.

Regarding claims 5 and 34, Wee discloses "the area is a region of interest" (Wee: column 10, lines 45-59, wherein the region of interest is the object).

Regarding claims 6 and 35, Koyanagi discloses "displaying the decoded set of macroblocks" (Koyanagi: figure 15, item 124).

6. Claims 7-9 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krishnamurthy et al. (6496607), (hereinafter referred to as "Krishnamurthy").

Regarding claims 7 and 36, Krishnamurthy discloses an apparatus that identifies and uses regions of interest to provide functionalities (Krishnamurthy: column 1, lines 8-12). This apparatus comprises "creating and transmitting a substream from a stream, the substream corresponding to a region of interest" (Krishnamurthy: figure 1, column 4, lines 32-67 – column 5, lines 1-17, wherein the stream is the input sequence. Although Krishnamurthy uses the term input sequence instead of stream, the examiner notes that there are many terms in the art that could have been used to describe an input sequence such as data stream, stream, input stream, ect). Although not disclosed, it would have been obvious to allow a second user to select a second different region of interest (Official Notice). Doing so would have been obvious in order to make the system more efficient by being able to accommodate more than one user at a time. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select a name that best corresponds to the user.

Regarding claims 8 and 37, Krishnamurthy discloses "synchronizing display of the substream with a second substream" (Krishnamurthy: figures 1 and 4, column 6, lines 39-44, wherein the buffers synchronize many streams).

Regarding claims 9 and 38, Krishnamurthy discloses "the creation and transmission of the substreams are performed in a lock step manner"

(Krishnamurthy: figures 1-3, column 4, lines 32-67 – column 5, lines 1-17, wherein the lock-step manner is the creation and synchronization).

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wee et al. (6553150), (hereinafter referred to as "Wee") in view of Koyanagi et al. (5557332), (hereinafter referred to as "Koyanagi").

Regarding claim 14, note the examiners rejection for claims 1 and 13, and in addition, claim 14 differs from claims 1 and 13 in that claim 14 further requires decoding an I picture, storing the macroblocks in a plurality of data structures, and forming a new I-frame as claimed. Koyanagi teaches that prior art compression systems have a variation in the quality of the reproduced picture (Koyanagi: column 2, lines 30-44). To help alleviate this and other problems, Koyanagi discloses an apparatus that "decodes an I-frame into macroblocks" (Koyanagi: figure 2, column 6, lines 34-51, wherein the slices can contain I-frames which is well known in the MPEG environment), "stores the pluraty of macroblocks into a plurality of data structures, each of the data structures corresponding to a different one of the regions of interest" (Koyanagi: figure 1, column 6, lines 34-45, wherein the data structures are the buffers, the regions of interest are the sets of slices), and "forms a new I-frame from the macroblocks stored in the data structures" (Koyanagi: figures 8A-8C, wherein the new picture formed could be an I-frame which is well known in the MPEG environment). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Wee and

add the system taught by Koyanagi in order to obtain an apparatus that improves video quality.

Allowable Subject Matter

8. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US-6573907 06-2003 Madrane, Nabil

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (703) 305-3418. The examiner can normally be reached on Monday - Friday 9 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600